What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. A computerized method for analyzing a plurality of amino acids in a fluid sample by a user, comprising the steps of:

introducing said sample into a buffer solution;

passing said sample in said buffer solution through a separation column;

setting a lithium ion concentration in said buffer to no more than 0.3 mols/L up to a time before β -aminoisobutyric acid (β -AiBA) is eluted; and

displaying said analysis for said user.

2. The computerized method of claim 1 further comprising setting a pH to no more than 3.5 for said buffer solution up to a time before said β -aminoisobutyric acid (β -AiBA) is eluted.

3. The computerized method of claim 1 further comprising setting said lithium ion concentration and a pH in said buffer solution to increase in a gradient fashion within a time of eluting from γ-amino-n-butyric acid (γ-ABA) to hydroxylysine (Hylys).

4. The computerized method of claim 3 further comprising setting said lithium ion concentration to increase from 0.44 mols/L to 1.00 mol/L and said pH to increase from 3.66 to 4.1 in said buffer solution.

5. The computerized method of claim 1 further comprising setting said lithium ion concentration at 0.81 mols/L and a pH at 4.00 in said buffer solution within an elution time from hydroxylysine (Hylys) to histidine (His).

6. The computerized method of claim 5 further comprising setting the lithium ion concentration at 1.00 mol/L and said pH at 4.1 in said buffer solution after the elution of histidine (His).

7. The computerized method of claim 1 further comprising setting a column temperature at 70°C within an elution time from valine (val) to homocitrulline (Hcit).

8. The computerized method of claim 1 further comprising setting a column temperature at 70°C within an elution time of tyrosine (Tyr).

9. The computerized method of claim 1 further comprising setting a column temperature at 63°C within an elution time of from cysteine-homocysteine mixed disulfides (Cys-Hcys) to tryptophane (Trp).

10. The computerized method of claim 1 wherein said pluarlity of

amino acids is selected from the group comprising: phosphoserine (P-Ser), taurine (Tau), phosphoethanolamine (PEA), urea (Urea), asparginic acid (Asp), hydroxyproline (Hypro), methionine sulfoxide (MetSOX), threonine (Thr), Serine (Ser), asparagine ($AspNH_2$), glutamic acid (Glu), glutamine ($GluNH_2$), Sarcosine (Sar), α-aminoadipic acid (α-AAA), proline (Pro), glycine (Gly), analanine (Ala), citrulline (Cit), α-amino-n-butyric acid (α-ABA), valine (Val), pipecolic acid (Pipeco), homocysteine (HCysH), methionine (Met), homocytrulline (HCit), allo-isoleucine (Allo-Ile), cystine (Cys), saccharopin (Saccha), isoleucine (Ile), leucine (Leu), tyrosine (Tyr), cystathionine (Cysthi), phenylalanine (Phe), allgininosuccinic acid (ASA), cysteine-homocysteine mixed disulfides (Cys-Hcys), β -alanine (β -Ala), aminolevulinic acid (ALevA), β -aminoisobutyric acid (β -AiBA), γ-amino-n-butyric acid (γ-ABA), homocystine (HCys), alugininosuccinic acid anhydride 1 (ASA-Anhy1), ethanolamine ($EOHNH_2$), tryptophan (Trp), ammonia (NH_3), hydroxylysine (Hylys), aminoethylcysteine (AEC), ornithine (Orn), lysine (Lys), 1-methylhistidine (1Mehis), histidine (His), 3-methylhistidine (3Mehis), anserine (Ans), carnosine (Car) and arginine (Arg).

11. An apparatus for analyzing a plurality of amino acids in a fluid sample by a user comprising:

a container for supplying a buffer solution;

a control valve for controlling a lithium ion concentration and pH of said buffer solution;

an auto sampler for supplying said fluid sample;

a separation column for separating said plurality amino acids in said buffer fluid sample; and

a processor in communication with said control valve and said auto sampler said processor being programmed for:

introducing said sample into a buffer solution;

passing said sample in said buffer solution through a separation column;

setting a lithium ion concentration in said buffer to no more than 0.3 mols/L up to a time before β -aminoisobutyric acid (β -AiBA) is eluted; and

displaying said analysis for said user.

12. The apparatus of claim 11 further comprising setting a pH to no more than 3.5 for said buffer solution up to a time before said β -aminoisobutyric acid (β -AiBA) is eluted.

13. The apparatus of claim 11 further comprising setting said lithium ion concentration and a pH in said buffer solution to increase in a gradient fashion within a time of eluting from γ-amino-n-butyric acid (γ-ABA) to hydroxylysine (Hylys).

14. The apparatus of claim 13 further comprising setting said lithium ion concentration to increase from 0.44 mols/L to 1.00 mol/L and said pH to increase from 3.66 to 4.1 in said buffer solution.

15. The apparatus of claim 11 further comprising setting said lithium ion concentration at 0.81 mols/L and a pH at 4.00 in said buffer solution within an elution time from hydroxylysine (Hylys) to histidine (His).

16. The apparatus of claim 15 further comprising setting the lithium ion concentration at 1.00 mol/L and said pH at 4.1 in said buffer solution after the elution of histidine (His).

17. The apparatus of claim 11 further comprising setting a column temperature at 70°C within an elution time from valine (val) to homocitrulline (Hcit).

18. The apparatus of claim 11 further comprising setting a column temperature at 70°C within an elution time of tyrosine (Tyr).

19. The apparatus of claim 11 further comprising setting a column temperature at 63°C within an elution time of from cysteine-homocysteine mixed disulfides (Cys-Hcys) to tryptophane (Trp).

20. The apparatus of claim 11 wherein said pluarlity of amino acids is selected from the group comprising: phosphoserine (P-Ser), taurine (Tau), phosphoethanolamine (PEA), urea (Urea), asparginic acid (Asp), hydroxyproline (Hypro), methionine sulfoxide (MetSOX), threonine (Thr), Serine (Ser), asparagine ($AspNH_2$), glutamic acid (Glu), glutamine ($GluNH_2$), Sarcosine (Sar), α-aminoadipic acid (α-AAA), proline (Pro), glycine (Gly), analanine (Ala), citrulline (Cit), α-amino-n-butyric acid (α-ABA), valine (Val), pipecolic acid (Pipeco), homocysteine (HCysH), methionine (Met), homocytrulline (HCit), allo-isoleucine (Allo-Ile), cystine (Cys), saccharopin (Saccha), isoleucine (Ile), leucine (Leu), tyrosine (Tyr), cystathionine (Cysthi), phenylalanine (Phe), allgininosuccinic acid (ASA), cysteine-homocysteine mixed disulfides (Cys-Hcys), β -alanine (β -Ala), aminolevulinic acid (ALevA), β -aminoisobutyric acid (β -AiBA), γ-amino-n-butyric acid (γ-ABA), homocystine (HCys), alugininosuccinic acid anhydride 1 (ASA-Anhy1), ethanolamine ($EOHNH_2$), tryptophan (Trp), ammonia (NH_3), hydroxylysine (Hylys), aminoethylcysteine (AEC), ornithine (Orn), lysine (Lys), 1-methylhistidine (1Mehis), histidine (His), 3-methylhistidine (3Mehis), anserine

(Ans), carnosine (Car) and arginine (Arg).

21. A method for analyzing a plurality of amino acids in a fluid sample comprising the steps of:

introducing said sample into a buffer solution;

passing said sample in said buffer solution through a separation column; and

setting a lithium ion concentration in said buffer to no more than 0.3 mols/L up to a time before β-aminoisobutyric acid (β-AiBA) is eluted.

22. The method of claim 21 further comprising setting a pH to no more than 3.5 for said buffer solution up to a time before said β-aminoisobutyric acid (β-AiBA) is eluted.

23. The method of claim 21 further comprising setting said lithium ion concentration and a pH in said buffer solution to increase in a gradient fashion within a time of eluting from γ-amino-n-butyric acid (γ-ABA) to hydroxylysine (Hylys).

24. The method of claim 23 further comprising setting said lithium ion concentration to increase from 0.44 mols/L to 1.00 mol/L and said pH to

increase from 3.66 to 4.1 in said buffer solution.

25. The method of claim 21 further comprising setting said lithium ion concentration at 0.81 mols/L and a pH at 4.00 in said buffer solution within an elution time from hydroxylysine (Hylys) to histidine (His).

26. The method of claim 25 further comprising setting the lithium ion concentration at 1.00 mol/L and said pH at 4.1 in said buffer solution after the elution of histidine (His).

27. The method of claim 21 further comprising setting a column temperature at 70°C within an elution time from valine (val) to homocitrulline (Hcit).

28. The method of claim 21 further comprising setting a column temperature at 70°C within an elution time of tyrosine (Tyr).

29. The method of claim 21 further comprising setting a column temperature at 63°C within an elution time of from cysteine-homocysteine mixed disulfides (Cys-Hcys) to tryptophane (Trp).

30. The method of claim 21 wherein said pluarlity of amino acids is selected from the group comprising: phosphoserine (P-Ser), taurine (Tau), phosphoethanolamine (PEA), urea (Urea), asparginic acid (Asp),

hydroxyproline (Hypro), methionine sulfoxide (MetSOX), threonine (Thr), Serine (Ser), asparagine ($AspNH_2$), glutamic acid (Glu), glutamine ($GluNH_2$), Sarcosine (Sar), α-aminoadipic acid (α-AAA), proline (Pro), glycine (Gly), analanine (Ala), citrulline (Cit), α-amino-n-butyric acid (α-ABA), valine (Val), pipecolic acid (Pipeco), homocysteine (HCysH), methionine (Met), homocytrulline (HCit), allo-isoleucine (Allo-Ile), cystine (Cys), saccharopin (Saccha), isoleucine (Ile), leucine (Leu), tyrosine (Tyr), cystathionine (Cysthi), phenylalanine (Phe), allgininosuccinic acid (ASA), cysteine-homocysteine mixed disulfides (Cys-Hcys), β -alanine (β -Ala), aminolevulinic acid (ALevA), β -aminoisobutyric acid (β -AiBA), γ-amino-n-butyric acid (γ-ABA), homocystine (HCys), alugininosuccinic acid anhydride 1 (ASA-Anhy1), ethanolamine ($EOHNH_2$), tryptophan (Trp), ammonia (NH_3), hydroxylysine (Hylys), aminoethylcysteine (AEC), ornithine (Orn), lysine (Lys), 1-methylhistidine (1Mehis), histidine (His), 3-methylhistidine (3Mehis), anserine (Ans), carnosine (Car) and arginine (Arg).

31. A computerized method for analyzing a plurality of amino acids in a fluid sample by a user, comprising the steps of:

introducing said sample into a buffer solution;

passing said sample in said buffer solution through a separation

column;

setting a lithium ion concentration in said buffer to no more than 0.3 mols/L up to a time before β-aminoisobutyric acid (β-AiBA) is eluted;

setting a pH to no more than 3.5 for said buffer solution up to a time before said β-aminoisobutyric acid (β-AiBA) is eluted; and

displaying said analysis for said user.

32. An apparatus for analyzing a plurality of amino acids in a fluid sample by a user comprising:

a container for supplying a buffer solution;

a control valve for controlling a lithium ion concentration and pH of said buffer solution;

an auto sampler for supplying said fluid sample;

a separation column for separating said plurality amino acids in said buffer fluid sample; and

a processor in communication with said control valve and said auto sampler said processor being programmed for:

introducing said sample into a buffer solution;

passing said sample in said buffer solution through a separation column;

setting a lithium ion concentration in said buffer to no more than 0.3 mols/L up to a time before β -aminoisobutyric acid (β -AiBA) is eluted;

setting a pH to no more than 3.5 for said buffer solution up to a time before said β -aminoisobutyric acid (β -AiBA) is eluted; and

displaying said analysis for said user.

33. A method for analyzing a plurality of amino acids in a fluid sample comprising the steps of:

introducing said sample into a buffer solution;

passing said sample in said buffer solution through a separation column;

setting a pH to no more than 3.5 for said buffer solution up to a time before said β -aminoisobutyric acid (β -AiBA) is eluted; and

setting a lithium ion concentration in said buffer to no more than 0.3

mols/L up to a time before β-aminoisobutyric acid (β-AiBA) is eluted.